

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	43869	(code or coding or encode or encoding or identif\$4 or identification or id) near\$5 (transaction or purchase or invest\$4 or payment or check or credit or debit)	USPA T; US-P GPUB ' EPO; JPO; DERW ENT; IBM_ TDB; USOC R	2002/02/0 7 12:20
2	BRS	L3	22951	(category\$5 or classif\$4 or sort\$4 or arrange or arranging or arranged or arrangement or organiz\$5) near\$5 (transaction or purchase or invest\$4 or payment or check or credit or debit)	USPA T; US-P GPUB ' EPO; JPO; DERW ENT; IBM_ TDB; USOC R	2002/02/0 7 12:26
3	BRS	L4	1489	1 same 3	USPA T; US-P GPUB ' EPO; JPO; DERW ENT; IBM_ TDB; USOC R	2002/02/0 7 12:33

	Type	L #	Hits	Search Text	Dbs	Time Stamp
4	BRS	L5	369	(remot\$3 or central\$3 or center) near5 3	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM_ TDB; USOC R	2002/02/07 12:37
5	BRS	L6	44	4 and 5	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM_ TDB; USOC R	2002/02/07 12:44
6	BRS	L8	66	@pd<=19710101 and (705/1 or 705/30 or 705/32 or 705/33 or 707/10 or 707/104.1 or 709/217).ccls.	USPA T; US-P GPUB ; EPO; JPO; DERW ENT; IBM_ TDB; USOC R	2002/02/07 13:11
				Scanned Ti, H, K, W, C, all		
				Scanned Ti all		

	Document ID	Issue Date	Inventor	Current OR	Current XRef	Pages
1	GB 2251098 A	19910507	MCHUGH, N			19
2	US 2515124 A	19500711	(see image)	234/2	101/19; 101/369; 234/46; 234/67; 83/917	16
3	US 6112188 A	20000829	Hartnett, William J.	705/35	705/36	42
4	US 6014454 A	20000111	Kunkler, Todd M.	382/137	283/57; 283/58; 382/141; 382/175; 382/294; 382/317	45
5	US 5917931 A	19990629	Kunkler, Todd M.	382/137	283/57; 283/58; 382/139; 382/175	44
6	US 5842185 A	19981124	Chancey, Jason D. et al.	705/40	705/35; 902/24	10
7	US 5740271 A	19980414	Kunkler, Todd M. et al.	382/137	235/379; 283/58	34
8	US 5737440 A	19980407	Kunkler, Todd M.	382/137	235/379; 235/456; 235/57; 382/141; 382/175; 382/294; 382/317	45

L6 results

# DIALOG 07 FEBRUARY 2002

File 2:INSPEC 1969-2002/Feb W1 (c) 2002 Institution of Electrical Engineers  
File 6:NTIS 1964-2002/Feb W3 (c) 2002 NTIS, Intl Cpyrght All Rights Res  
File 7:Social SciSearch(R) 1972-2002/Feb W2 (c) 2002 Inst for Sci Info  
File 8:Ei Compendex(R) 1970-2002/Feb W1 (c) 2002 Engineering Info. Inc.  
File 9:Business & Industry(R) Jul/1994-2002/Feb 06 (c) 2002 Resp. DB Svcs.  
File 14:Mechanical Engineering Abs 1973-2002/Jan (c) 2002 Cambridge Sci Abs  
File 15:ABI/Inform(R) 1971-2002/Feb 07 (c) 2002 ProQuest Info&Learning  
File 16:Gale Group PROMT(R) 1990-2002/Feb 07 (c) 2002 The Gale Group  
File 20:Dialog Global Reporter 1997-2002/Feb 07 (c) 2002 The Dialog Corp.  
File 34:SciSearch(R) Cited Ref Sci 1990-2002/Feb W2 (c) 2002 Inst for Sci Info  
File 35:Dissertation Abs Online 1861-2002/Feb (c) 2002 ProQuest Info&Learning  
File 47:Gale Group Magazine DB(TM) 1959-2002/Feb 07 (c) 2002 The Gale group  
File 63:Transport Res(TRIS) 1970-2002/Jan (c) fnt only 2002 Dialog Corp.  
File 65:Inside Conferences 1993-2002/Feb W1 (c) 2002 BLDSC all rts. reserv.  
File 77:Conference Papers Index 1973-2002/Jan (c) 2002 Cambridge Sci Abs  
File 80:TGG Aerospace/Def.Mkts(R) 1986-2002/Feb 07 (c) 2002 The Gale Group  
File 94:JICST-EPlus 1985-2002/Dec W4 (c)2002 Japan Science and Tech Corp(JST)  
File 99:Wilson Appl. Sci & Tech Abs 1983-2001/Dec (c) 2002 The HW Wilson Co.  
File 108:AEROSPACE DATABASE 1962-2001/DEC (c) 2002 AIAA  
File 148:Gale Group Trade & Industry DB 1976-2002/Feb 07 (c)2002 The Gale Group  
File 160:Gale Group PROMT(R) 1972-1989 (c) 1999 The Gale Group  
File 233:Internet & Personal Comp. Abs. 1981-2002/Feb (c) 2002 Info. Today Inc.  
File 256:SoftBase:Reviews,Companies&Prods. 85-2002/Dec (c)2002 Info.Sources Inc  
File 275:Gale Group Computer DB(TM) 1983-2002/Feb 07 (c) 2002 The Gale Group  
File 278:Microcomputer Software Guide 2001/Dec (c) 2001 Reed Elsevier Inc.  
File 347:JAPIO Oct/1976-2001/Oct(Updated 020204) (c) 2002 JPO & JAPIO  
File 348:EUROPEAN PATENTS 1978-2002/Jan W04 (c) 2002 European Patent Office  
File 349:PCT FULLTEXT 1983-2002/UB=20020131,UT=20020124 (c) 2002  
WIPO/Univentio  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec (c) 1998 Inst for Sci Info  
File 473:FINANCIAL TIMES ABSTRACTS 1998-2001/APR 02 (c) 2001 THE NEW YORK  
TIMES  
File 474:New York Times Abs 1969-2002/Feb 02 (c) 2002 The New York Times  
File 475:Wall Street Journal Abs 1973-2002/Feb 06 (c) 2002 The New York Times  
File 476:Financial Times Fulltext 1982-2002/Feb 07 (c) 2002 Financial Times Ltd  
File 583:Gale Group Globalbase(TM) 1986-2002/Feb 06 (c) 2002 The Gale Group  
File 608:KR/T Bus.News. 1992-2002/Feb 07 (c)2002 Knight Ridder/Tribune Bus News  
File 610:Business Wire 1999-2002/Feb 07 (c) 2002 Business Wire.  
File 613:PR Newswire 1999-2002/Feb 07 (c) 2002 PR Newswire Association Inc  
File 621:Gale Group New Prod. Annou.(R) 1985-2002/Feb 07 (c) 2002 The Gale Group  
File 623:Business Week 1985-2002/Feb 07 (c) 2002 The McGraw-Hill Companies Inc  
File 624:McGraw-Hill Publications 1985-2002/Feb 07 (c) 2002 McGraw-Hill Co. Inc

File 625:American Banker Publications 1981-2002/Feb 06 (c) 2002 American Banker  
 File 634:San Jose Mercury Jun 1985-2002/Feb 06 (c) 2002 San Jose Mercury News  
 File 635:Business Dateline(R) 1985-2002/Feb 07 (c) 2002 ProQuest Info&Learning  
 File 636:Gale Group Newsletter DB(TM) 1987-2002/Feb 07 (c) 2002 The Gale Group  
 File 637:Journal of Commerce 1986-2002/Feb 06 (c) 2002 Journal of Commerce Inc  
 File 810:Business Wire 1986-1999/Feb 28 (c) 1999 Business Wire  
 File 813:PR Newswire 1987-1999/Apr 30 (c) 1999 PR Newswire Association Inc

Set	Items	Description
S1	133512	(CODE OR CODING OR ENCODE OR ENCODING OR IDENTIF???? OR IDENTIFICATION OR ID) (5N) (TRANSACTION OR PURCHASE OR INVEST???? OR PAYMENT OR CHECK OR CREDIT OR DEBIT)
S2	51764	(CATEGORY OR CATEGORIZE OR CATEGORIZED OR CATEGORIZING OR CLASSIFY OR CLASSIFIED OR CLASSIFYING OR CLASSIFICATION) (5N) (TRANSACTION OR PURCHASE OR INVEST???? OR PAYMENT OR CHECK OR CREDIT OR DEBIT)
S3	81196	(SORT OR SORTED OR SORTING OR ARRANGE OR ARRANGING OR ARRANGED OR ARRANGEMENT) (5N) (TRANSACTION OR PURCHASE OR INVEST???? OR PAYMENT OR CHECK OR CREDIT OR DEBIT)
S4	74556	(ORGANIZE OR ORGANIZED OR ORGANIZING OR ORGANIZATION) (5N) (TRANSACTION OR PURCHASE OR INVEST???? OR PAYMENT OR CHECK OR CREDIT OR DEBIT)
S5	3398	S1 (S) (S2 OR S3 OR S4)
S6	1508	(REMOT??? OR CENTRAL??? OR CENTER) (5N) (S2 OR S3 OR S4)
S7	26	S5 AND S6
S8	24	RD S7 (unique items) [Scanned ti,kwic all]

8/9/1 (Item 1 from file: 15)

DIALOG(R)File 15:ABI/Inform(R) (c) 2002 ProQuest Info&Learning. All rts. reserv.

00925463 95-74855

A consolidated approach to investment fund management

Kadlec, Mark A

TMA Journal v14 n5 PP: 42-46 Sep/Oct 1994

ISSN: 0731-1281

JRNL CODE: JCG

DOC TYPE: Journal article

LANGUAGE: English

LENGTH: 4 Pages

SPECIAL FEATURE: Charts

WORD COUNT: 1185

1 ABSTRACT: Geisinger Health System is a multi-institutional health system consisting of  
2 9 affiliated corporations in central Pennsylvania. In 1993, a review of the existing investment fund  
3 structure resulted in the implementation of a master custody structure that more effectively  
4 supported investment management activities. In developing the master custody structure, Geisinger  
5 established certain objectives to achieve more effective investment management. Geisinger selected  
6 a financial institution to serve as master custodian and established a project team to ensure a  
7 smooth transition. A consultant was retained to assist Geisinger in establishing asset allocation  
8 targets for each fund type. Through its multi-level structure, the master custody structure meets  
9 Geisinger's objectives. Geisinger's workload has been reduced through the automation and  
10 redesign of existing processes. The pooling of investments also may provide greater leverage in  
11 negotiating investment manager agreements.

12 TEXT: Investment fund management is an increasingly complex and sophisticated activity  
13 for many organizations. This is particularly true in the healthcare industry in which diverse pools  
14 of investment funds exist. Industry consolidation and merger activity are creating  
15 multi-institutional health systems with significant investment assets. The effective management of  
16 these assets is critical in attaining maximum investment returns and generating needed cashflow.  
17 This article will describe how Geisinger implemented a consolidated investment fund management  
18 program.

#### 19 Background

20 Geisinger is a multi-institutional health system consisting of nine affiliated corporations  
21 (the "Affiliates") which serve the healthcare needs of rural **central** Pennsylvania. As the  
22 **organization** evolved during the 1980s, several **investment** funds were established to segregate  
23 and manage investment assets. Some funds pooled Affiliate investment assets of similar purpose  
24 while others were Affiliate-specific. In 1993, the existing investment fund structure was evaluated  
25 to determine opportunities for improvement. The evaluation resulted in the implementation of a  
26 master custody structure (the "Master Custody Structure") which more effectively supported

investment management activities.

The Master Custody Structure supports a consolidated investment management program which pools all investment assets for more effective investment management. Exhibit A is a conceptual model of the Master Custody Structure.

#### Master Custody Structure

In developing the Master Custody Structure, Geisinger established certain objectives designed to achieve more effective investment management. These objectives include:

Segregate and manage funds within four asset classes: equity, fixed intermediate, fixed 1-3 year, and cash equivalents.

Support allocation of investment assets by Affiliate and fund type with investment income allocated accordingly.

Facilitate centralized control and monitoring of investment funds.

Allow all Affiliates to experience the same rate of return for holdings in each of the four asset classes.

Control risk through monitoring of asset allocation, investment style diversification (explained further herein) and investment manager diversification.

Improve investment performance monitoring and reporting.

The Master Custody Structure shown in Exhibit A has three levels which help the company in meeting these objectives. Four internal commingled investment pools represent the asset level (the "Asset Level"), which consists of Affiliate-pooled funds segregated by asset class. Investment management activity focuses on maximizing the return of each Asset Level pool. This is achieved by retaining suitable investment managers for a portion of each Asset Level pool. Asset Level pool investment performance is a function of the combined performance of the pool's investment managers.

The investment manager accounts are reflected at the manager level (the "Manager Level") while allocation of assets and investment income occurs at the fund level (the "Fund Level"). Accounts of the Fund Level receive investment performance based upon ownership of units (shares) in the Asset Level pools. For example, a Fund Level account with 50 percent of its assets invested in the equity pool and the remaining 50 percent invested in the fixed intermediate pool would have an aggregate return equal to the weighted average of the equity and fixed intermediate pool returns. Each account at the Fund Level reflects a specific Affiliate's assets segregated by fund type. (See Exhibit B for a description of each fund type and the purpose of same.)

When it was determined that the Master Custody Structure would meet the desired objectives, Geisinger initiated the implementation process.

#### Master Custody Structure Implementation

Geisinger selected a financial institution to serve as master custodian for the Master Custody Structure. To provide for a smooth transition of existing investment funds to the Master Custody Structure, a project team consisting of Geisinger and financial institution representatives was established. The project team developed an implementation timeline and addressed

66 implementation issues. Simultaneously with the Master Custody Structure implementation process,  
67 certain related activities occurred. A consultant was retained to assist Geisinger in establishing  
68 asset allocation targets for each fund type based upon the fund type's relative time horizon  
69 (liquidity requirements) and risk profile. Using the consultant's database, it was possible to model  
70 risk/return characteristics by fund type in order to determine an appropriate asset allocation target  
71 for that fund type. Exhibit C presents the fund type asset allocation targets. One can see from  
72 Exhibit C that equity exposure and fixed-income maturity increase as the relative time horizon  
73 lengthens and the relative risk profile increases. The appropriate asset allocation of each Affiliate  
74 results from an assessment of factors such as fund objectives, fund cash-flow requirements, risk  
75 tolerance, and internal business forecasts. The aggregate asset allocation results from combining  
76 the strategic decisions of each Affiliate. Asset allocation is managed at the Fund Level, by  
77 account, through the "purchase" of units in the Asset Level pools. The Master Custody Structure  
78 supports the asset allocation activities by unitizing the Asset Level pools and reflecting ownership  
79 of Asset Level units at the Fund Level.

80 **Investment** managers can be **classified** by the type of **investment** style they use. For  
81 example, an equity investment manager who focuses on stocks with rapid earnings growth could  
82 be classified as using a growth style. Geisinger **identified** certain **investment** styles to be used in  
83 achieving increased diversification of investment processes. This resulted in higher expected  
84 returns and lower expected risk as measured by volatility. The consultant provided support in  
85 modeling the combined risk/return characteristics of various investment style allocations. Asset  
86 Level pool assets were sub-divided according to the investment style targets shown in Exhibit D.  
87 Under the Master Custody Structure, investment style is controlled by placing assets in the  
88 investment style-specific Manager Level accounts. After an evaluation process, investment  
89 managers with expertise in the stated investment styles were assigned investment management  
90 responsibility for the Manager Level accounts.

91 Investment securities are held in the respective Manager Level accounts with the Asset  
92 Level and Fund Level accounts serving primarily as reporting and control mechanisms.

#### 93 Benefits of Master Custody Structure

94 Through its multi-level structure, the Master Custody Structure meets Geisinger's stated  
95 objectives previously identified in this article. Also, Geisinger's workload has been reduced  
96 through the automation and redesign of existing processes. In addition, certain economies of scale  
97 such as lower combined investment management fees have resulted through the use of a pooled  
98 approach instead of managing individual accounts at the Fund Level. Further, pooling of assets  
99 helps the company in meeting investment manager minimum account size and may provide greater  
100 leverage in negotiating investment manager agreements.

#### 101 Words of Wisdom

102 Organizations interested in implementing a similar structure should consider taking the  
103 following steps:

- 104 \* Obtain senior management support.
- 105 \* Design a system which meets organizational needs and objectives.
- 106 \* Select a financial institution capable of supporting the desired structure.



- 107           \* Solicit investment manager input and support.
- 108           \* Engage a consultant as necessary to assess asset allocation targets, investment style
- 109 targets ,and investment manager capabilities relative to the desired investment styles.
- 110           \* Obtain the advice of counsel in developing and documenting the master custody
- 111 structure.
- 112           \* Create a project team to implement the conversion process.
- 113           Mark A Kadlec is responsible for the Geisinger Health System's centralized treasury
- 114 function including cash, debt and investment management activities. Prior to joining Geisinger,
- 115 Kadlec held positions at the Goodyear Tire and Rubber Company and Prudential Securities, Inc.
- 116 He holds a B.B.A. degree in finance from Kent State University and an M.S.B.A. degree in
- 117 management from Bucknell University.

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1994

00536793 91-11137

Understanding the New Statement of Cash Flows

Graci, Samuel P.

Business v40 n3 PP: 47-50 Jul-Sep 1990

CODEN: BUSIDW

ISSN: 0163-531X

JRNL CODE: AEC

DOC TYPE: Journal article

LANGUAGE: English

LENGTH: 4 Pages

SPECIAL FEATURE: References

GEOGRAPHIC NAMES: US

DESCRIPTORS: Cash flow; Financial statements; \*FASB\* statements;  
Provisions

CLASSIFICATION CODES: 9190 (CN=United States); 3100 (CN=Capital &  
debt management); 4120 (CN=Accounting policies & procedures)

ABSTRACT: In July 1988, the \*Financial\* \*Accounting\* \*Standards\* \*Board\* issued Statement 95, which addresses many of the issues and perhaps resolves much of the criticism surrounding the funds statement. Cash and cash equivalent, rather than working capital, is now the focus of the funds statement. A more detailed format and classification scheme for cash flows recognizes operating, investing, and financing activities of a firm. The purpose of the new cash flow statement is to help investors, creditors, and others to: 1. assess an enterprise's ability to generate positive future net cash flows, 2. assess an enterprise's ability to meet its obligations, its ability to pay dividends, and its needs for external financing, 3. assess reasons for differences between net income and associated cash receipts and payments, and 4. assess the effects on any enterprise's financial position of both its cash and noncash investing and \*financial\* \*transactions\*. The \*statement\* has become more uniform, allowing greater comparability among firms.

DERWENT-ACC-NO: 1991-199057

DERWENT-WEEK: 199127

4 ~ COPYRIGHT 1999 DERWENT INFORMATION LTD 14 ~

TITLE: Computer system for transfer of funds between bank accounts - includes payments router with central processor, enquiry template store, debit entry template and credit entry format store

INVENTOR-NAME: MCHUGH, N

PRIORITY-DATA: 1990LU-0087869 (December 21, 1990) , 1990GB-0027301 (December 17, 1990)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
LU 87869 A	May 7, 1991	N/A	000	N/A
GB 2251098 A	June 24, 1992	N/A	018	G06F 015/30
GB 2251098 B	October 5, 1994	N/A	003	G06F 015/30

INT-CL\_(IPC): G06F015/30

ABSTRACTED-PUB-NO: GB 2251098A

EQUIVALENT-ABSTRACT: The system consists, in outline, of a hub, (101), which receives an input from a customer's computer, (102), validatea and acknowledges the input and reformats it as necessary. It is transmitted to a payments router (103), which will be located in the chief office of the bank.

The payment router analyses the linput, determines the route for making the payment, generates the payment instructions, receives confirmation to the hub, and generates advice notes, reports, transaction logs, and any error messages or requests for manual intervention that may be necessary.

ADVANTAGE - All transactions may be recorded in transaction log file to provide complete audit trail. (First major country equivalent to LU--87869)

Apparatus for processing data relating to the transfer of funds between accounts and comprising a computer system including a payments router (103), the payments router including a central processor (202), an enquiry template store (205), a debit entry template store (208), a credit entry format store (209) and means for storing routing information, and in which the central processor is arranged to receive a payment instruction and to a) examine the destination field of the instruction to identify the destination account for the payment, b) call up the appropriate inquiry template from the inquiry template store and therewith to reformat part of the payment instruction into a format acceptable to the computer system of the beneficiary's account as an account enquiry, c) transmit the enquiry to that system to confirm that the destination is a valid one, d) examine the source field of the instruction to identify the payer's account, e) call up the appropriate inquiry template from the inquiry template store and therewith to reformat part of the payment instruction into a format acceptable to the computer system of the source account and transmit it as an enquiry as to whether there are sufficient funds in the account to meet the payment, f) on such confirmation to call up a further template from the debit entry template store

and therewith format the debit portion of the instruction into a form which the system of the payer's account will accept as an instruction to debit the account, g) transmit the formatted instruction to that system, h) call up the credit entry format appropriate to the destination account from the credit entry format store, i) formulate the credit portion of the instruction in accordance with the credit entry format for transmittal or further processing, and j) maintains a record of each stage of the transaction.

US-PAT-NO: 5740271

DOCUMENT-IDENTIFIER: US 5740271 A

TITLE: Expenditure monitoring system

DATE-ISSUED: April 14, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kunkler; Todd M.	Lake View Ter.	CA	N/A	N/A
Davidson; Daniel R.	Downey	CA	N/A	N/A
Sanner; Scott J.	Huntington Beach	CA	N/A	N/A

US-CL-CURRENT: 382/137,235/379 ,283/58

**ABSTRACT:** An improved system and method is provided for automatically tracking check transactions and generating an expenditure statement thereof using printed bank checks having a plurality of graphic icons disposed thereon. The customer marks the icon which describes the particular expense for which the check payment is being made. The payor bank or a check processing center scans each check to determine which icon(s) have been marked for each particular check transaction. Recorded expenditures are then automatically recorded in a cumulative transaction record. Periodically, this information is organized into a detailed expenditure statement that can be provided to the bank customer.

26 Claims, 19 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 15

----- KWIC -----

**BSPR:** One particularly popular computer accounting software program is marketed under the name "Quicken.TM." and is available from Intuit, Inc. of Menlo Park, Calif. This program allows users to assign expenditure account categories by entering a text description of each into the program's database. For each check transaction, the user then identifies the appropriate account category and types in the check number and check amount. Once the information has been entered into the computer, it can be manipulated electronically to generate various types of account statements, expenditure charts and the like, which can be accessed by the user via a video display monitor, an attached printer or magnetic disk storage media. Deposits and other transactions are handled in a similar fashion by the user's manually entering the raw data from the deposit slip, transaction receipt or the like, into the computer.

**BSPR:** Other expenditure tracking systems have been proposed in which the bank check, itself, can be labeled or marked by a bank customer with numbered expenditure categories. Upon presentment of such a check for payment, the bank teller reenters the expenditure category number in magnetic code ("MICR") on the bottom of the check . The check is then processed using a MICR decoder. A centralized computer records the transaction amount and expenditure category number for each check and provides the customer with a periodic statement of expenditures. In this manner, the labor intensive step of re-entering expenditure account information into a

computer is, in effect, shifted from the customer to the bank.

DEPR: A customer desiring to purchase groceries at a grocery store, for instance, might write out a check for \$50 to pay for the groceries, marking an icon on the check picturing a grocery cart or other indicia representative of grocery expenses. Once the transaction is completed and the check is presented for payment, the payor bank, a check clearing house or a designated processing center scans each check to determine selected expenditure categories and records this information in association with other basic information identifying the transaction . This may be done either before or after the check is paid and canceled, as desired.

DEPR: Although the particular icons shown in FIG. 3 are preferred for indicating household-type expenditures, it will be readily appreciated by those skilled in the art that any number of various graphic icon designs may be used to represent the same or similar expenditure categories. In other words, icons and corresponding categories may be changed to accommodate the needs of particular bank customers. It is further envisioned that different sets of icons may be provided to meet the needs of different types of households. For instance, a dual income couple with no children may have different expenditure tracking requirements than a family of five, or a single person in college, for instance. In an alternative embodiment, checks are printed with custom icons selected by bank customers from a predetermined list according to their own individual needs. In that case, a bank or processing center scanning the checks would preferably record selected icons and corresponding expenditure categories for each individual bank customer.

DEPR: FIG. 7 is a front view of one possible embodiment of an expenditure statement 112 in accordance with the present invention. The statement 112 contains customary information such as the account number and bank customer name at the top, as shown. Expenditures are then broken down by category, such as auto expenses, groceries, etc., as shown. Within each category are listed corresponding check transaction numbers 113, obtained, for instance, from the MICR code. Next to each check transaction number 113 is provided a printed image of the payee name 114, obtained from the check image, and the amount of the check 115, as determined from the MICR code . Optionally, this check amount may be verified against the amount written in the check amount box using a modified OCR technique described in more detail later.

DEPR: To process a particular customer's bank statement, the statement is first scanned into a computerized image processing system. The software first registers the column location for each particular field of information contained on the statement. Variable zones are then defined extending down from each corresponding field. The zones are variable in the sense that the software will continue to expect data to occur in the same horizontal field location until it confronts a different graphic configuration, such as a horizontal line in a zone defining text. The software will then expect that the zone is changing where a new type of data will be processed. This new zone will be identifiable, not only by the horizontal line and text, but an OCR reader will also encounter new headings and column configurations which also signifies the occurrence of a new or different type of data. The text within each zone is then OCR read and recorded. Key words in the POS and ATM description fields are similarly identified and recorded such that the transactions may be properly categorized and identified in a subsequently generated expenditure report. Other possible preferred embodiments will be readily apparent to those skilled in the art.

US-PAT-NO: 5842185

DOCUMENT-IDENTIFIER: US 5842185 A

TITLE: Method and system for electronically tracking financial transactions

DATE-ISSUED: November 24, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Chancey; Jason D.	Redwood Shores	CA	N/A	N/A
Cook; Scott D.	Woodside	CA	N/A	N/A
Borden; Lisa Jean	Hayward	CA	N/A	N/A

US-CL-CURRENT: 705/40,705/35 ,902/24

**ABSTRACT:** A system and method automatically enters financial transactions such as credit card transactions into a financial account stored in a computer. A financial statement incorporating the transactions is provided in an electronic form understood by the computer, such as a computer data file, for updating the financial account. For a credit card account, the electronic statement includes one or more credit card transactions such as purchases. Before accepting the electronic statement, the process verifies that the electronic form of the statement has not been altered since its creation and therefore correctly reflects transactions in the original statement. In the process of entering the transactions, they are tracked by automatically assigning them to expense categories. First the process determines from the electronic statement if a payee for a transaction is of record in the computer and, if so, assigns the transaction to a category already associated with the payee. If not, the process next determines from the electronic statement a merchant category code such as a Standard Industry Code (SIC). The merchant category code is associated with a category recognized by the computer, and the transaction is assigned to the recognized category . If no recognized category exists, the process prompts the user for a category to which the transaction can be assigned.

36 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 3

----- KWIC -----

**ABPL:** A system and method automatically enters financial transactions such as credit card transactions into a financial account stored in a computer. A financial statement incorporating the transactions is provided in an electronic form understood by the computer, such as a computer data file, for updating the financial account. For a credit card account, the electronic statement includes one or more credit card transactions such as purchases. Before accepting the electronic statement, the process verifies that the electronic form of the statement has not been altered since its creation and therefore correctly reflects transactions in the original statement. In the process of entering the transactions, they are tracked by automatically assigning them to expense categories. First the process determines from the electronic statement if a payee for a transaction is of record in the computer and, if so, assigns the transaction to a category already associated with the payee. If not, the process next determines from the electronic statement a merchant

category code such as a Standard Industry Code (SIC). The merchant category code is associated with a category recognized by the computer, and the transaction is assigned to the recognized category . If no recognized category exists, the process prompts the user for a category to which the transaction can be assigned.

BSPR: In another aspect, the invention comprises a computerized method and system for assigning financial transactions such as credit card transactions to categories . This assignment occurs in the process of entering the transactions into a financial account stored in a computer. One form of the method includes determining from the electronic statement if a payee for a transaction is of record in the computer and, if so, assigning the transaction to a category already associated with the payee. Another form of the method includes determining from the electronic statement a merchant category code such as a Standard Industry Code (SIC). The merchant category code is associated with a category recognized by the computer, and the transaction is assigned to the recognized category . If no recognized category exists, the method may prompt a user for selection of a category for association with the merchant category code. The two methods may be combined wherein the merchant category code is checked only if the payee for a transaction is not of record in the computer. The invention may also take the form of systems related to these methods.

DEPR: If the process fails to locate a previous transaction with the same payee, then the process determines from the statement a merchant category code associated with the present transaction (step 44). This category code, such as the Standard Industry Code, is a number that corresponds to a description of the payee's primary business or description of the type of transaction, such as service charge, credit, and the like, and is present in financial statements such as credit card statements. For example, a restaurant's merchant category code may be 5812, and a credit may have the category code 2100. The process constructs a look-up table in the memory of the computer for associating, or translating, merchant category codes with categories recognized by the process. In the example above, the process might associate the 5812 code with a recognized category such as "Dining." Assuming an association exists, the process assigns the present transaction to the recognized category (steps 46, 48).

DEPR: However, the look-up table is not necessarily complete, and a recognized category for a merchant category code may not exist in the present credit card account 24 (step 46). In this event, the user is prompted to select a category for association with the merchant category code (step 50). This selection may either be an unrecognized category suggested by the process or a recognized category chosen by the user from a list of recognized categories. If the unrecognized category is selected, the process adds it to the list of recognized categories.

CLPR: 6. The computer-implemented process of claim 1, wherein each transaction in the electronic statement includes a merchant category code, the process further comprising the steps of, if the payee for the transaction is not a payee of a previous transaction stored in the storage device:

CLPR: 26. The computer system of claim 25 wherein the processor determines if the merchant



category code included in the transaction is stored in association with a category in the storage device with a look-up table.

CLPV: determining with the processor from the electronic statement a merchant category code included in the transaction ;

CLPV: if the merchant category code is associated with a category in the storage device, assigning with the processor the transaction to the category associated with the merchant category code ; and

CLPV: compiling with a remote processor in the remote computer system an electronic statement including at least one transaction, the transaction including a merchant category code, the electronic statement in an electronic data format processable by the local computer system;

CLPV: determine a merchant category code included in the transaction if the payee of the transaction is not a payee of a previous transaction stored in the storage device;

CLPV: to determine if the merchant category code included in the transaction is stored in association with a category in the storage device; and

CLPV: to assign the transaction to a category stored in association with the merchant category code and to store the assigned transaction in the storage device.

CLPW: determining with the processor from the electronic statement a merchant category code included in the transaction ;

CLPW: if the merchant category code is associated in the storage device with a category, assigning with the processor the transaction to the category associated with the merchant category code ; and

CLPW: a remote processing device programmed to compile an electronic statement in an electronic data format processable by the local computer system, the electronic statement including at least one transaction, each transaction including a merchant category code ;

CLPW: a processor operatively coupled to the storage device and the input device for fetching transactions, merchant category codes, and categories from the storage device; the processor programmed to:

CLPX: to determine for at least one transaction in the electronic statement received from the remote computer system the merchant category code included in the transaction ;

CLPX: to determine if the merchant category code included in the transaction is stored in association with a category in the storage device; and

CLPX: to assign the transaction to a category stored in association with the merchant category code, and to store the assigned transaction in the financial account stored in the storage device.

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DOCUMENT-IDENTIFIER: US 4025905 A

TITLE: System for on-line processing of banking transactions

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INVENTOR-INFORMATION:

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US-CL-CURRENT: 709/227, 709/217, 902/39, 902/5, 902/8

**ABSTRACT:** A branch banking system for on-line processing of banking transactions which is responsive to customer-initiated and teller-initiated operations and comprises a plurality of remote branch office terminals and a central controller for establishing transaction validity, maintaining transaction records and customer data. Each branch office terminal includes a branch controller in communication with the central controller and an associated plurality of branch teller stations, each including a teller unit and an associated set of peripheral units. Each teller station includes a teller data display which is responsive to the central controller, by way of its associated branch controller, to display alphanumeric data representative of the transactions. The set of peripheral units includes: a PIN (Personal Identification Number) signal generator, customer operated, for generating a PIN signal representative of specific data associated with that customer, a card reader for generating a CARD signal representative of data magnetically encoded on a region of a card as the card is read, and a teller data entry terminal. Each teller data entry terminal includes a first and a second teller-operated keyboard for respectively generating a FUNCTION signal representative of a desired banking function and a NUMERIC signal representative of a desired transaction. Each teller unit includes storage for temporarily storing the PIN, CARD, FUNCTION, and NUMERIC signals as generated.

Each branch controller includes means to repetitively sample the storage of each of its teller units in succession at a polling frequency at least twice the character generation rate of the various peripheral units, means to identify each sampling time when a new character has been generated since the last sampling time, and means to transfer the new character signal when a new character is identified, together with an address signal or tag representative of the associated peripheral unit to the central controller. The central controller is responsive to the succession of new character signals to identify the customer account number and desired transactions, and is further responsive to successively validate the received new character signals, establish a record of the transaction, up-date the current customer account data to reflect the transaction, and transmit an authorization signal and data representative of the transaction to the display.

6 Claims, 4 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 4

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Abstract Text - ABTX (1): A branch banking system for on-line processing of banking transactions which is responsive to customer-initiated and teller-initiated operations and

comprises a plurality of remote branch office terminals and a central controller for establishing transaction validity, maintaining transaction records and customer data. Each branch office terminal includes a branch controller in communication with the central controller and an associated plurality of branch teller stations, each including a teller unit and an associated set of peripheral units. Each teller station includes a teller data display which is responsive to the central controller, by way of its associated branch controller, to display alphanumeric data representative of the transactions. The set of peripheral units includes: a PIN (Personal Identification Number) signal generator, customer operated, for generating a PIN signal representative of specific data associated with that customer, a card reader for generating a CARD signal representative of data magnetically encoded on a region of a card as the card is read, and a teller data entry terminal. Each teller data entry terminal includes a first and a second teller-operated keyboard for respectively generating a FUNCTION signal representative of a desired banking function and a NUMERIC signal representative of a desired transaction. Each teller unit includes storage for temporarily storing the PIN, CARD, FUNCTION, and NUMERIC signals as generated.

Each branch controller includes means to repetitively sample the storage of each of its teller units in succession at a polling frequency at least twice the character generation rate of the various peripheral units, means to identify each sampling time when a new character has been generated since the last sampling time, and means to transfer the new character signal when a new character is identified, together with an address signal or tag representative of the associated peripheral unit to the central controller. The central controller is responsive to the succession of new character signals to identify the customer account number and desired transactions, and is further responsive to successively validate the received new character signals, establish a record of the transaction, up-date the current customer account data to reflect the transaction, and transmit an authorization signal and data representative of the transaction to the display.